

What are the Market Types and Barriers to Entry for the Brick Industry in Bireuen Regency, Province of Aceh?: Emperical evidence based on the SCP approach and CR4 Analysis

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ABSTRACT

The brick industry business in Bireuen Regency is located in 2 (two) sub-district areas, Peusangan production centers, namely; Peusangan and Kota Juang. The brick industry in this area is generally privately owned. The widespread growth of this type of business is a concern for observation and research. The aim of this research is to highlight the market types that apply to the brick manufacturing industry and the level of barriers to entering the market in Bireuen Regency. The research was conducted using experimental-based primary data obtained from 113 manufacturing industries spread across the regions of Peusangan Subdistrict and Kota Juang Subdistrict. The methods and data analysis used are Structure-Conduct-Performance (SCP) and Concentration Ratio for the Biggest Four (CR4) analysis to explain the market competition situation. The findings indicate that the type of brick industry market in Bireuen Regency is a monopolistic market with a relatively low level of barriers to entry for new manufacturing industries. Where there is no manufacturer that has a market share of more than 5 percent. This allows the brick making industry to develop more widely, especially in the Bireuen Regency area, Province of Aceh.

Keywords: market; brick industry; SCP; CR4.

1. Introduction

The brick industry business in Bireuen Regency is a type of manufacturing business owned by individuals. There are relatively many brick industries compared to other areas in Aceh Province. However, the spread of business is not widespread, and is only concentrated in Peusangan and Kota Juang Sub-districts. The brick industry is able to provide added value to the economy, so that this industry is known as one type of business that is able to absorb labor in Bireuen Regency (Statistik, Bireuen Dalam Angka, 2022). On one hand, the brick industry is a business that is easy to operate with adequate resources (input). However, the technology used to produce bricks is still very simple with a relatively low level of product innovation, where the labor required only requires low skills and most of it is performed by women. According (Javier Bilbao-Ubillos, et al., 2023), technological resources have a fundamental role in the production process.

The development of the brick business in Bireuen Regency shows good economic prospects. This is shown by the relatively long continuity of business, on average it has lasted more than 5 years, Especially in Bireuen Regency, generally these brick businesses are able to survive the level of market competition. The study of the market structure for the brick industry is interesting. Where production centers are only located in certain areas. In fact, there seems to be freedom to enter the market if you

want to run a brick business (Prayoga, 2018). Each market can be limited by two dimensions, namely product type and geographic area. Does this apply to brick industry businesses in Bireuen Regency?

Market competition between brick producers is an economic problem that is often faced by all business actors. The large number of business units is the trigger for the emergence of a competitive market. Various efforts are made by each producer in order to gain market share through strategies for increasing and exploiting market opportunities (Utterbock and Sudrez 2019). The most urgent thing to pay attention to in developing an industrial business is the market and marketing aspects, where marketing is the spearhead for the success and continuity of manufacturing industry businesses. The brick industry's adaptability to face competition is a form of market structure that will influence market behavior and performance going forward.

Industrial behavior can be utilized as a tool to analyze the conduct and implementation of strategies undertaken by manufacturers in the market to gain market share while facing other competing manufacturers, both those currently in the market and manufacturers seeking to enter the market. Pricing and institutional systems that apply to the brick industry are elements that can be observed to assess market conduct. In addition, market performance describes the competitive level existing within the market system and relates to the level of efficiency and technological advancement achieved by each industry (Alam, 2023).

This research was conducted to highlight the formation of the brick market structure through indicators of market share acquisition both on average and dominantly controlled by each industry or a certain group of industries and the level of concentration that applies in the two regions sub-districts, namely; Peusangan and Juang City. Furthermore, barriers to market entry are a series of effects of market structure conditions that need to be studied systematically, consisting of; background, literature review, methodology, results and discussion, policy implications, and conclusions.

2. Literature Review

Market structure is the condition of a market that shows aspects that can have an important influence on market and industrial conduct, leading to the achievement of manufacturing industry performance. Among the aspects of market structure are the number of sellers and buyers, product diversity and distribution systems, market share, and barriers to market entry and exit. A market structure that addresses the existence of institutions indicates attributes that influence the nature of competition. The market share element as an initial determinant of market structure formation is the market size, which is determined based on the percentage share ratio controlled by manufacturers, usually calculated from the number of products considering certain characteristics, while market concentration is an indicator of market structure that determines behavior, behavior and the level of competition in the market (Carlos Costelon, 2023). If the level of concentration in a market is higher or concentrated in only certain areas, then the power of the manufacturing industry in the market becomes stronger and the market mechanism operates imperfectly, and this impacts the form of the prevailing market structure. According (Cramer, 2009), Concentration Ratio is the sum of the highest market shares achieved by four manufacturing industries in a market in a region. Furthermore, barriers to entry into a market are anything that allows for decreased opportunities and weakened market access capabilities for new manufacturing industries. Barriers to market entry are created by previous industries that have been in the market for a long time. This is also a barrier to industry growth.

Competition systems differentiation into patterns, namely perfect markets of competition and imperfect markets of competition. A perfectly competitive market is a form of market structure that

gives freedom to parties and economic actors in the market, both to enter and exit, and has open information about products that makes it possible for consumers and even other competing manufacturers to know. Considering that there are many producers and consumers in a perfectly competitive market, no single producer or consumer can influence market prices. Where, prices are determined through an independent demand and supply mechanism. that is, the market cannot be organized by certain parties in a perfect competition system. In addition, the products offered are homogeneous and difficult to differentiate between one product and another, in terms of size, color and quality. The distribution of production factors in a perfectly competitive market is easy to change. Therefore, the emergence of new industrial businesses has relatively large opportunities for development.

In the type of imperfect competition such as monopoly, the market structure is influenced by a particular manufacturer and is singular without any other competitors. The lack of substitutes for goods or products from other industries has made monopoly companies the determinators of market prices. The price of a monopoly product remains the same even though other economic factors change. Additionally, various forms of decision making can be implemented by manufacturers who have full control of the market share. To avoid waste that could harm consumers and society at large, the government is expected to intervene in monopoly markets to protect the interests of the people.

In a monopolistically competitive market, the market structure results from a combination of pure competition and monopoly market structures. Every manufacturing industry has the freedom to enter a market. The products produced have diversity and There is product differentiation. the existence of a large number of producers or manufacturers, but the products offered are different with certain characteristics but have the same function as other products. Producers have little power to influence the market.

Market structure elements need to be combined to determine the level of competition in the market. However, there is no standard formula to apply, but it depends on the decision making of each manufacturer. The market share of other manufacturing industries is one of the basic considerations for competing. The largest market share is below 20 percent and the combined concentration of four companies is below 40 percent, so some form of effective competition will emerge even though barriers to entry are high (Couto and Barbosa, 2020). Manufacturers who dominate the market usually take unilateral action against small-scale manufacturers as competitors in the same market.

3. Research Methodology

This research is a qualitative descriptive study that interprets data and information obtained from brick industry business actors in Bireuen Regency, Aceh Province by conducting interviews, and is supported by information that is relevant to the research topic through research experimentally based and direct field observation. There are 3 steps carried out in this research, namely; 1), collecting information and primary data regarding market share, 2), providing criticism of data sources based on experimental observations, 3), interpreting research results. The number of brick manufacturing industries selected was 113 industrial business units in Peusangan District and Juang City, Bireuen Regency based on purposive sampling considerations, where the characteristics of the brick industry type are homogeneous and use the same main raw material (in the form of clay) the same; therefore, there is no need to carry out stratified sampling. The analytical method used is based on the Structure, Conduct, Performance (SCP) approach and Concentration Ratio for the Biggest Four (CR4) analysis.

4. Result and Discussion

The market is a commodity space, where producers and consumers influence and interact with each other to determine the prices desired by both. The market is a place for small-scale brick producing industries which will face many competitors, especially from large-scale industrial businesses. Differences in the amount and scale of production achieved by manufacturers can be seen through market share.

The brick industry business centers in Bireuen Regency are in Peusangan and Kota Juang Sub-district. The market size of the brick industry is relatively large with a total of 3,155,000 pieces per production from a total manufacturing industry of 113 business units. According to the categories in Table 1, the accumulated market share of 22 brick business units is 19.50 percent, or on average 0.7 percent with total production from each manufacturing industry reaching 20,000 to 25,000 pieces. Each manufacturer has not been able to achieve a market share above 2 percent. The large number of industries means that the challenge of achieving a larger market share faces limitations. There are only 11 manufacturing industries or around 9.7 percent with a market share of 1.5 to 1.9 percent with a production volume of 50,000 to 65,000. If we look at production capabilities, generally the brick industry in Bireuen Regency is still relatively small scale, even micro scale (Anant L. Murmu, 2018)

Based on the research results in Table 1 below, it indicates that the market size of the brick industry in Bireuen Regency is reflected in the total brick production.

Table 1. Number of brick industries and market share in Bireuen Regency based on production.

Category	number of Industries	Production Capacity (interval)	Market Share (%)
I	17	≥15.000 – 20.000	15,04
II	22	>20.000 – 25.000	19,50
III	15	>25.000 – 30.000	13,27
IV	21	>30.000 – 35.000	18,58
V	11	>35.000 – 40.000	9,73
VI	9	>40.000 – 45.000	7,96
VII	7	>45.000 – 50.000	6,19
VIII	4	>50.000 – 55.000	3,54
IX	4	>55.000 – 60.000	3,54
X	3	>60.000 – 65.000	2,65
Total	113	3.155.000	100

Source; field research (2023).

There is no dominant group of companies in the brick product market, indicating that brick manufacturing in Bireuen Regency has not been able to influence the market (Wie and Chen., 2023). Based on research findings, the brick industry is a type of household-owned business that requires workers with relatively simple hard skills. The number of workers in each brick business unit reaches 3 – 4 people, and is classified as a micro business (Fahmiya, et al., 2023).

Based on analysis of the Concentration Ratio for the Biggest Four (CR4) by adding up the largest market share of the four manufacturers (Cramer, 2009), it is obtained at 7.5 percent, or less than 10 percent. This means that the level of manufacturing industry concentration is low, and is not concentrated in one particular region, but spreads to other regions. However, geographical regional factors are one of the dimensions that create market boundaries. Based on experimental observations, the brick industry in Bireuen Regency is predominantly located in the only Peusangan and Kota Juang Sub-district. Even though Bireuen Regency has 17 sub-districts. Geographical regional factors have the potential to act as barriers to market entry for new industries located outside Sub-district of Peusangan and Kota Juang. However, through product innovation and the use of new inputs (other than clay), it is possible to develop building materials industry businesses such as lightweight bricks in the Bireuen Regency area as an alternative to create new jobs for the community. Another finding from the research is that, based on special entity, this business can be categorized into a perfectly competitive market-monopolistic competitive market.

5. Conclusion

The availability of raw material resources influences people's choices in choosing the type of business they undertake. One of them is clay as the main ingredient in brick production. These two sub-districts are potential providers of good quality clay. Based on the results of the analysis conducted through observations and a series of research activities on the brick industry in Bireuen Regency, it shows that this manufacturing business is capable of absorbing labor and contributing to the economy. Broader business development is certainly the hope of all stakeholders. Based on research issues that have been answered, the brick industry in Bireuen has not been able to influence the market structure. Where, there is no dominant manufacturing group that controls market share. Apart from that, the level of manufacturing concentration is still low, which allows the emergence of more innovative manufacturing industry businesses that produce different products but have the same function, such as lightweight bricks. Barriers to entering the market for industries located in Sub-district Peusangan and Kota Juang still allow free entry. Thus, the brick product market can be classified into the perfect market-monopolistic type of competition. Where, geographical regional factors are still a dimension that creates market boundaries.

6. References

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